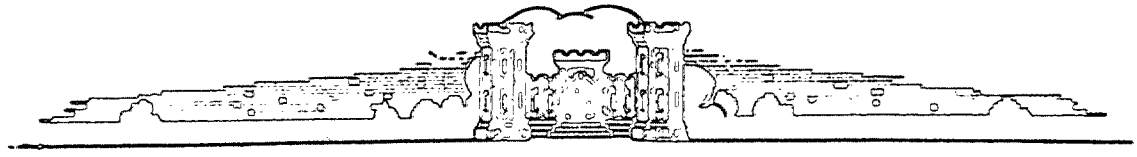
SMALL NAVIGATION PROJECT

BASS HARBOR

MAINE

DETAILED PROJECT REPORT



U.S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS WALTHAM, MASS.

MARCH 1962

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

ADDRESS REPLY TO:
DIVISION ENGINEER

REFER TO FILE NO.

28 March 1962

NEDGW

SUBJECT: Detailed Project Report for Small Navigation Project, Bass Harbor, Maine

TO: Chief of Engineers
ATTN: ENGCW-P
Department of the Army
Washington 25, D. C.

1. In accordance with EM 1165-2-107 there is submitted herewith for review and comment the advance draft of the subject report.

2. Responsible officials of the Town of Tremont and the State of Maine have indicated an intention of meeting the requirements of local cooperation. Formal assurances of participation will be obtained from these agencies during preparation of final designs for the project.

3. The plans and specifications will be prepared in accordance with the Detailed Project Report as approved. Funds in the amount of $8,000 for preparation of plans and specifications, and $180,000 for construction will be required.

FOR THE DIVISION ENGINEER:

1 Incl
Detailed Project
Report (7 cys)

JOHN WM. LESLIE
Chief, Engineering Division

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DETAILED PROJECT REPORT
SMALL NAVIGATION PROJECT - BASS HARBOR
TREMONT, MAINE

PERTINENT DATA

1. Purpose. To eliminate tidal delays and reduce damages from storms and overcrowded conditions in the harbor by providing additional anchorage of sufficient depth for the commercial fishing fleet.

2. Location. On the southwest side of Mount Desert Island east of the entrance to Blue Hill Bay about 100 miles northeast of Portland, Maine.

3. Existing Project. There is no Federal project for Bass Harbor. A project does exist for Bass Harbor Bar which extends southward from Bass Harbor Head to Great Gott Island about two miles southeast of the entrance to Bass Harbor. The project was adopted by the River and Harbor Act of March 4, 1913, completed the same year, and provides for a 14-foot channel 250 feet wide across the bar a short distance south of Bass Harbor Head. This short cut for coastwise vessels does not affect the improvement desired at Bass Harbor. Federal expenditures for the improvement of Bass Harbor Bar to date total $7,494 of which $4,076 has been expended for new work and $3,418 for maintenance, last performed in 1920.

4. Improvement Desired. Anchorage basin of approximately 125 acres dredged to depths of six and ten feet and a bulkhead on the east side of the harbor to permit plant expansion.

5. Recommended Improvement. An anchorage basin totaling approximately 24 acres, consisting of an eight-acre basin, ten feet deep in the inner harbor; a six-acre basin, six feet deep on the west side of the inner harbor; and a ten-acre basin, six feet deep at the head of the harbor.

6. Estimated Costs.

Dredging 6- and 10-foot anchorages	
96,000 C.Y. of ordinary material @ $1.45	$139,800
Contingencies @ 15%	21,200
Engineering and Design	8,000
Supervision and Administration	15,000
Construction Total	$184,000
Preauthorization Studies	12,000
Total Cost (Corps of Engineers).	$196,000*

*Local interests would be expected to assume responsibility for all costs that are incurred beyond the Corps of Engineers limitation of $200,000.

Other Costs.

Coast Guard: Additional aids to navigation. . .	$ 1,000
Local Interests: Public Landing & berth (self-liquidating)	15,000
Spoil Area Dike (self-liquidating)	5,000
Total Federal and Required Non-Federal Costs . .	$217,000

7. Annual Costs.

Federal:	Interest and Amortization - (100 years @ 2.625%) ($197,000 x 0.02838)	$ 5,600
	Maintenance: Dredging	5,300
	Navigation Aids.	100
		$ 11,000
Non-Federal:		-0-
Total Annual Charges		$ 11,000

8. Benefits. Benefits are expected to accrue to the commercial fishing fleet in the amount of - $34,700. No benefits would be realized by the small recreational fleet.

9. Benefit-Cost Ratio. $34,700/$11,000 = 3.2.

10. Requirements of Local Cooperation.

a. Make cash contribution for all costs in excess of $200,000 to insure that Federal expenditures result in a complete project.

b. Furnish lands, easements, and rights-of-way, including suitably diked spoil areas needed for construction and maintenance of the project.

c. Hold and save the United States free from damages that may result from construction and maintenance of the project.

d. Construct and maintain an adequate public landing on the west side of the harbor with commensurate berthing depths open to all on equal terms.

e. Regulate use, growth, and development of the harbor facilities open to all on equal terms.

AUTHORITY

11. This Detailed Project Report is submitted pursuant to authority contained in Section 107 of the River and Harbor Act of 1960. Further authority was provided by 1st Indorsement dated 13 December 1961 from the Chief of Engineers in reply to a letter, dated 7 December 1961 from the Division Engineer, New England Division, Subject: "Small Navigation Project, Bass Harbor, Maine".

PURPOSE AND EXTENT OF STUDY

12. This study considered the engineering and economic justification for Federal navigation improvements in Bass Harbor. A detailed hydrographic survey consisting of soundings and probings was made from which the character of the harbor bottom and estimated quantities to be dredged were determined. Available maps, commercial statistics and other data pertaining to the harbor were studied. A public hearing held in Tremont Town Hall, Bernard, Maine, on August 29, 1956, enabled local interests to present their views and information obtained therefrom is described under "Improvements Desired". Subsequent to the hearing, local Government officials and other local interests were consulted. All additions or changes in improvements which have been requested subsequent to the hearing have been considered in this report.

DESCRIPTION

13. Bass Harbor is located in the Town of Tremont, Maine, on the southwest side of Mount Desert Island, east of the entrance to Blue Hill Bay about 100 miles by water northeast of Portland, Maine. The nearest adjacent harbor is Southwest Harbor, about seven miles by water to the northeast.

14. The Harbor consists of an outer and inner harbor. The outer harbor is a rectangular bay about 1,500 yards wide at the entrance between Bass Harbor Head on the east, and Lopaus Point on the west, while the inner harbor is a long narrow inlet extending northward from the head of this bay. Depths in the outer harbor range from 30 to 46 feet at mean low water. The entrance to the outer harbor is clear except for Weaver Ledge located in the middle of the entrance and which is bare at low water. The ledge is buoyed, however, and the channel to either side has ample depth.

15. The inner harbor has a total area of approximately 200 acres about 75 percent of which is bare at low water. There are about 19 acres with depths greater than six feet and 12 acres with depths greater than ten feet within this area. A winding channel buoyed at the entrance and varying in width from 100 feet to 300 feet with depths ranging from 26 to 6 feet extends northward through the harbor between steep banks and shoal areas. Three streams empty into the harbor, one at its extreme northern end, and two on its west side.

16. The harbor is used mainly by vessels connected with the fishing industry consisting of lobster boats, scallopers, draggers, pumpers and carriers, the bulk of these being lobster boats. At the present time, only a very small fleet of recreational craft are based in the harbor; and since this harbor is primarily a fishing port, it is anticipated that improvement of the harbor would not increase the recreational boating activity to any substantial extent.

17. Although the outer harbor is exposed to the south, the inner harbor is fairly well protected. The mean range of tide is 9.9 feet. The locality is shown on the Coast and Geodetic Survey Charts Nos. 307, 308 and 1202 and on the map accompanying this report.

TRIBUTARY AREA

18. The area immediately tributary to Bass Harbor consists of the village of McKinley on the east side of the harbor, and the village of Bernard on the west side. Both villages are located within the Town of Tremont in Hancock County. In 1960 the Town of Tremont and the County of Hancock had populations of 1,044 and 32,293, respectively, as compared to the 1950 figures of 1,115 and 32,105, and 1940 figures of 1,118 and 32,422. The population of the Town of Tremont has decreased about 6 percent over the past 20 years while the population of the County of Hancock has remained stable.

19. The fishing industry provides the main source of income for the inhabitants of the two villages. The Town of Tremont, however, shares the resort activities of Mount Desert Island and has a considerable boat yard and machine shop business. Good roads extending along both sides of the harbor connect with roads leading to other sections of the island and to Ellsworth on the mainland 25 miles distant, where the nearest railroad connection is located.

BRIDGES

20. There are no bridges crossing any portion of the waterway under consideration in the report.

PRIOR REPORTS

21. There are no prior reports on Bass Harbor, Maine. A survey report published in House Document No. 1128, 62d Congress, 3d Session, was favorable to the improvement of Bass Harbor Bar and Deer Island Thoroughfare, and forms the basis of the existing project at Bass Harbor Bar.

EXISTING CORPS OF ENGINEERS PROJECT

22. There is no Federal project for Bass Harbor proper. The existing project for Bass Harbor Bar was adopted by the River and Harbor Act of March 4, 1913, and was completed during the same year. Bass Harbor Bar extends southward from Bass Harbor Head to Great Gott Island. The existing project provides for a channel 250 feet wide and 14 feet deep across the bar a short distance south of Bass Harbor Head. This channel affords a short cut for coastwise vessels skirting the southern shore of Mount Desert Island and does not otherwise affect the improvement desired at Bass Harbor about two miles to the northwest. Federal expenditures for the improvement of Bass Harbor Bar to date total $7,494 of which $4,076 has been expended for new work and $3,418 for maintenance, last performed in 1920.

LOCAL COOPERATION ON EXISTING AND PRIOR PROJECTS

23. No local cooperation was required for the existing project at Bass Harbor Bar.

OTHER IMPROVEMENTS

24. Except for the provision of landings, which are privately owned, but open to public use, no improvements for the benefit of general navigation have been made by local interests.

TERMINAL AND TRANSFER FACILITIES

25. Several wharves and boat servicing facilities are located in Bass Harbor. The two largest wharves, with depths of 8 to 10 feet alongside, are located on the east side of the harbor at the entrance to the inner harbor, and serve large fish canneries and lobster dealers. They are the William Underwood Canning Company, the Machiasport Canning Company, and the C. H. Rich Company, lobster dealer. The remaining fish wharves in the harbor are located on the west side and have depths of from two to four feet alongside. The Bass Harbor Boat Shop, which has a small wharf, is located on the west side of the inner harbor, a short distance southwest of John's Island. A second boat yard, the Davis Boat Yard, where boats up to 65 feet in length and 9 feet draft are constructed is located on the east side of the outer harbor about 1,200 feet south of the entrance to the inner harbor. The wharf at this boat yard has depths of 10 to 12 feet available alongside. This wharf, in addition to being used in connection with the boat building business, was used for years by the ferry boat which carries mail and freight to the outlying islands. In 1959, a new ferry terminal was constructed for the Maine Port Authority on the east side of the outer harbor approximately 200 feet north of the boatyard. It consists of a rockfill causeway approach 275 feet long and 16 feet wide, concrete piers with connecting ramp 77 feet long, and a slip about 100 feet in length formed of rockfilled timber cribs and timber piles faced with timber fenders. Depths in the slip vary from 10 to 16 feet below mean low water. Although no public landings are presently available at Bass Harbor, access to all wharves is allowed to all boats by the wharf owners. Gasoline and provisions are available in the harbor.

26. It was stated at the public hearing by the local people, and supported by letters submitted as exhibits to the hearing notes, that construction of additional facilities and improvements to existing facilities are contemplated if the desired navigation improvements are made. Local interests anticipate the construction of a public landing on the west side of the inner harbor. A second

public landing may be considered for the east side to provide access to the eastern extremity of the upper anchorage.

27. In the spring of 1960, the Higgins Fish Company located at the site of the former C. H. Rice Company on the west side of the harbor initiated groundfish operations. The structures which were partly destroyed by fire, prior to the public hearing, have been reconstructed. The Higgins Fish Company is the only dealer in groundfish located at Bass Harbor.

IMPROVEMENTS DESIRED

28. A public hearing was held at Tremont Town Hall, Bernard, Maine, on 29 August 1956, to determine the nature and extent of the improvements desired by local interests. The hearing was attended by representatives of the local government, the fishing industry, business interests and interested citizens. Approximately 60 persons attended the hearing.

29. Local interests expressed a desire for anchorage areas of adequate depth and size to provide for the substantial permanent and transient fishing fleets which use the harbor. A representative for a committee of the Tremont Chamber of Commerce outlined a plan for dredging the inner harbor to depths of six and ten feet between a line at the north, extending through Dix Point and the southern end of Sawyers Island to the shores on either side, and a line at the south extending across the entrance to the inner harbor from the end of Try House Point to the William Underwood Wharf. Desire was also expressed for the construction of a bulkhead on the east side of the harbor as shown on the map accompanying this report.

30. The desired improvement outlined by the Chamber of Commerce committee would provide an anchorage area of approximately 125 acres in the inner harbor. At the present time, a bar extends northwesterly from the point of land on which is located the Powers and Robinson machine shop. The desired dredging would provide depths of six feet at mean low water on the west side of the harbor below this bar and on both sides of the harbor above the bar, and depths of ten feet at mean low water on the east side of the harbor below the bar. Local interests state that the bar referred to is shoaling rapidly, constituting a hazard and occupying much needed mooring space.

31. Local interests stated that substantial areas of the harbor now are obstructed by silt and provide inadequate depths for the existing permanent and transient fishing fleets. It was further stated that the proposed improvement would: eliminate tidal delays

to the fishing vessels to unload their catch and to obtain supplies; provide access to the individual wharves; eliminate the overcrowded mooring conditions that presently obstruct clear passage to the existing terminal facilities; and eliminate the grounding out of anchored boats at low tides.

32. The belief was also expressed that the desired improvement of the harbor would bring about substantial increases in the permanent fishing fleet using the harbor, and in the fishing industry of the harbor itself. One spokesman for the fishing industry estimated that approximately 21 lobster boats of the size and value comparable to the present lobster fleet would be transferred to Bass Harbor. Fifteen of these local fishermen land their lobsters in Bass Harbor daily during the season, and currently are forced to moor their boats in the unprotected waters of Duck Cove, Goose Cove and Seal Cove. These are small coves located on the southwesterly side of Mount Desert Island, varying from three to six miles from Bass Harbor, which have no facilities either for marketing the fish catch or for purchasing gasoline and supplies. These fishermen have reported that they would use Bass Harbor as their home port if it were improved to provide additional anchorage area. In addition, local interests claim that five or six fishermen operating from harbors on nearby outer islands would move to Bass Harbor if the desired improvement were provided. At the present time, these fishermen maintain their cars on Mount Desert Island in the vicinity of Bass Harbor and use the villages of McKinley and Bernard as their shipping center. In addition, local interests estimate that three new sardine carriers costing upwards of $40,000 each will shortly be needed to replace those now in the service of local factories and that their size and design will depend upon the nature of the harbor improvement. It is also claimed that the desired improvement would encourage an increase in fish landings by draggers carrying catches not large enough to warrant the long trip to Rockland, Portland or Boston.

33. Representatives of several individual boat servicing concerns and fishing companies stated that provision of the desired improvement would facilitate and encourage expansion of their facilities. The owner of the Bass Harbor Boat Shop stated that dredging of the harbor would enable him to expand his boat servicing facilities, since additional mooring space for transient craft would then be available. A representative of the Powers and Robinson Machine and Repair Shop stated that his company plans further additions and expects to construct a landing for its customers if the desired improvement is effected.

34. The superintendent of the Machiasport Canning Company stated that he expected his company would expand the factory wharf if the desired improvement were provided. Similarly, the C. H. Rich Company stated its intention to expand its lobster and crabbing fleet, provided improvement is made. A representative of the F. W. Thurston Company stated that the company's business has increased to the point that expansion to the present wharf is required. However, due to the crowded mooring conditions in the immediate area, the congestion of boats interfere with navigation to the wharf. Therefore, no expansion is contemplated until the desired movements are made.

35. The advantages of Bass Harbor as a harbor of refuge for recreational craft were discussed by a member of the Cruising Club of America who claimed that dredging of the inner harbor would increase the natural advantages of Bass Harbor as a harbor of refuge and as a stop-over point for the purchase of supplies by the constantly increasing number of yachtsmen cruising the Maine coast. Recreational craft visiting the harbor are expected to double if improvements are provided.

36. At a meeting held with local and State interests at Tremont, Maine, on 27 October 1961, it was pointed out that because an improvement of the scope requested in the 1956 public hearing (125 acres, 6 and 10 feet deep) would not be economically justified for reasonable prospective boat traffic, a smaller improvement which would meet the needs of navigation interests could possibly be found economically justifiable. As a result of the meeting, local interests requested that consideration be given to a revised plan of improvement.

EXISTING AND PROSPECTIVE COMMERCE

37. The principal commercial activities at Bass Harbor are fish and fish products, shellfish, canning, and facilities for the repair of boats and the supply of marine equipment. There are no commerce statistics listed in the Waterborne Commerce record book for this harbor. The following data is based upon U. S. Fish and Wildlife Service reports, company records, and local information.

38. The Higgins Fish Company, which initiated groundfish operations in 1960, currently handles about 500 tons of groundfish annually. In the event the harbor improvements proposed in this report are constructed, it is expected that the local landings of groundfish would be increased by 500 tons annually due to a transfer of 8 draggers which currently must land their catches at other harbors, although the latter harbors are three hours further from the fishing grounds.

These draggers do not enter Bass Harbor for fear of grounding out. The proposed improvements also are expected to gradually increase local landings of groundfish over the first 50 years of the life of the project to an ultimate additional amount of 500 tons. In addition to this groundfish commerce, several sardine boats operate out of this port during the canning season. Two canning companies pack over 100,000 cases of sardines annually with a value in excess of $1,000,000.

39. The average annual landings of Maine lobster, which accounts for most of the shellfish industry, are presently over 500 tons. This lobster is brought into port by 69 lobster vessels, of which 54 base at Bass Harbor while the remaining 15 utilize nearby coves due to lack of anchorage area. The proposed improvements are expected to allow for expansion of the inshore lobster fleet by about four new boats with corresponding annual landings of 30 tons. The improvements will also provide for normal expansion of the lobster fleet over the first 50 years of the project life, particularly as the offshore lobster resources make an offshore fishery more attractive. It is estimated that these future landings may reach 60 tons annually. Several scallop boats, each making about seventy trips per season and bringing into port approximately 100 pounds per day, further increase the total shellfish commerce. In addition to the local Maine lobster brought in and sold at Bass Harbor, over 1,500 tons of Canadian lobsters are landed there annually for trans-shipment.

40. Thuts Express Company has brought into Bass Harbor as much as 600 tons of freight annually, of which about 300 tons are trans-shipped by the Bay Ferry to Frenchboro and Swans Island.

VESSEL TRAFFIC

41. There is no complete record of vessel traffic in Bass Harbor. The permanent commercial fleet consist of about 70 boats, of which 54 are lobster boats, four are carriers, and four are draggers. The remaining vessels are seiners, pumpers, and a mail boat. The lobster boats, which vary in length from 24 to 40 feet and draw from two to three feet of water, average 160 round-trips per boat during each lobster season, representing a total of approximately 8,500 round-trips annually. In addition, a part of this lobster fleet is converted for trawl fishing when the lobster season is over. It is claimed that these boats average 40 round-trips during the short season. The total average number of round-trips made annually by the fish and scallop draggers and sardine carriers, which vary in length from 30 to 70 feet and in draft from 2.5 to 8.0 feet, is difficult to estimate since the trips vary in

time anywhere from one to three days depending upon the location of the fish and availability of a market. Local interests state that a scallop boat averages about 70 round-trips per year. Fifteen lobster boats currently mooring in nearby coves due to a lack of sufficient anchorage area in Bass Harbor make daily landings of lobster in this port during the lobster season. Based on 160 round-trips per boat, these 15 boats total about 2,400 round-trips annually.

42. There are five permanently based recreational craft in the harbor. They are of the inboard and cruiser class varying in length from 16 to 24 feet, and in draft from one to two feet. Assuming two trips per week per vessel during a 16-week boating season, these craft make about 150 vessel trips annually. It is expected that one new boat and one transferred boat would be added in the event of harbor improvement. Local interests indicate that presently about 30 transient yacht and cruise schooners visit the harbor each season and they feel this number will double if the harbor is improved.

43. It has also been indicated by local information that sixty lobster fishermen, comprising the fleets of outlying islands, annually use the facilities at Bass Harbor for boat and engine repairs, shopping, and recreation. An average of 30 herring seiners use the harbor and its repair facilities each season during the run of fish in that area. Twenty-five sardine carriers, other than those based at Bass Harbor, annually use the port and its facilities. Sixty coastwise lobster smacks unload over 3,000,000 pounds of lobster annually for trans-shipment. It is also stated that twelve medium and large draggers refuge and supply at the harbor each year.

44. Additional vessel trips are made by small tankers of eight- to ten-foot draft which unload gasoline, gas oil and distillate fuel, and kerosene for local consumption, and by a mail boat and a freight boat. It has been reliably reported that approximately 200 round-trips annually are made by vessels of eight- to ten-foot draft, i.e., small tankers and sardine carriers.

DIFFICULTIES ATTENDING NAVIGATION

45. The principal difficulties attending navigation in Bass Harbor are those attendant to insufficient mooring space of adequate depth and insufficient depth for access to the wharves and terminals in the inner harbor. It was stated by the local people that the inadequate depths of water in the inner harbor are due to a long period of shoaling which has reduced the usable area of the harbor

to a point where the harbor is overcrowded. In addition, the shoaling condition necessitates the local and transient fishermen to land their catch and to purchase supplies at times of one to three feet of flood tide at terminals and wharves in the inner harbor.

46. An inner tier of closely moored lobster boats on the southwest side of the harbor is aground at low tide. The west side of the harbor can be utilized only by highly maneuverable craft because of crowded moorings. A bar which extends in a northwesterly direction from the east side of the inner harbor where the Powers and Robinson Machine Shop property is located, can be passed only with local knowledge and only by light draft vessels due to the resulting narrow channel.

47. On the east side of the harbor, it is claimed that a southwest wind in combination with an ebb current turns boats broadside to the chop causing them to roll uncomfortably. Boats, particularly in this area, are frequently damaged during severe storms, especially from the southwest, since combinations of wind and tide often bring the closely moored craft together as they swing, with resulting vessel damage.

WATER POWER AND OTHER SPECIAL SUBJECTS

48. This investigation presents no problems pertaining to water power, flood control, pollution or related subjects. The desired improvement would have no adverse effect on wildlife or shellfish.

PLAN OF IMPROVEMENT

49. The extensive plan of improvement desired by local interests was considered only to the extent that it was apparent that the requested anchorage of 125 acres was far in excess of the area needed for the present Bass Harbor fleet, the fishing fleet that might be expected to transfer to Bass Harbor from nearby coves and outlying islands, the regular transient craft now using the harbor and any anticipated increase that might reasonably be expected.

50. As a result of the meeting held with local interests on 27 October 1961, at which it was pointed out that the improvement requested at the 1956 hearing was not economically feasible, it was further requested by local interests that a revised plan of improvement be considered. The plan of improvement finally determined as most

nearly accomplishing the desired purpose in the most practical manner, without the need for ledge rock removal, would provide an anchorage basin with a total of 24 acres. This anchorage basin would consist of (a) six acres of anchorage, six feet deep on the southwest side of the inner harbor adjacent to the developed waterfront area between Try House Point and the George Higgins Fish Company; (b) eight acres of anchorage, ten feet deep adjacent to and east of the six-foot anchorage; and (c) ten acres of anchorage, six feet deep and varying in width from 200 to 300 feet wide extending northerly from the Higgins Fish Company to the Bass Harbor Boat Shop, thence generally easterly south of St. John's Island to the east side of the harbor. This improvement is shown on the map accompanying this report.

51. The bulkhead desired by local interests does not appear feasible. To contain material to an elevation of 14 feet involving about 30,000 cubic yards and to withstand tidal and wave action, a bulkhead 500 feet long of substantial construction would be required. Ledge within the bulkhead area makes the use of steel sheet piling or timber sheathing impractical. A stone dike with stone and gravel filter material would cost about $50,000 which would be entirely a local expense. Local interests have indicated that they would not be able to meet this expense. Therefore, no further consideration has been given to this improvement.

52. Local interests have indicated that this plan of improvement would meet their needs and desires and that the associated requirements of local cooperation would be met.

53. Spoil disposal areas would be needed for the most economical construction of the improvement and local interests are willing to furnish the required areas. The U. S. Fish and Wildlife Service has been consulted and has commented on possible spoil disposal sites in the area designated as the periphery of Bass Harbor. Their report, with a map showing the area of study, is included in Appendix A. They report that they would object to spoil disposal on the large area known as Bass Harbor Marsh in the north part of the harbor and on the tidal flats of the cove located in the vicinity of the Powers and Robinson Machine Shop property. Further, they recommend that the latter area be avoided by the dredging operator during construction, since the area is a clam flat providing part-time employment for some of the people. The U. S. Fish and Wildlife Service state they would have no objection to spoil disposal on the area designated number 3 about one-half mile northwest of Sawyers Island. This area shown on their plate in Appendix A, has sufficient capacity to receive all the material to be dredged. It appears that disposal can be effected without adverse effect on fish and wildlife.

SHORELINE CHANGES

54. The proposed dredging in Bass Harbor would have no adverse effect on the shoreline of the existing harbor.

REQUIRED AIDS TO NAVIGATION

55. The Commander, First Coast Guard District, has been consulted and advised that navigation aids will be required. The cost of providing the necessary aids to navigation is estimated to be $1,000, with $100 annually for maintenance.

ESTIMATE OF FIRST COST

56. An estimate of the first cost for construction of the proposed plan of improvement has been made on the basis of soundings and probings taken during the hydrographic surveys of May and June 1957. It is anticipated that the materials to be dredged would be primarily mud and sand with some gravel and a few cobbles. Unit prices are based on prices prevailing in March 1962, and on the removal of the material by hydraulic methods with spoil disposal areas within one mile of the job site. Dredging quantities are in terms of in-place measurement and provide for dredging to depths of six feet and ten feet below mean low water for the three anchorage basins, plus an allowance of one-foot overdepth with side slopes of one vertical to three horizontal. The cost is broken down as follows:

PROJECT COST ESTIMATE

Cost Account Number		Cost Estimate (March 1962)
09	CHANNELS	
	(24-acre anchorage - 6 to 8 ft. deep; dredging hydraulically - 96,000 c.y. mud, sand, some gravel @ $1.45/c.y.)	$139,800
	(Contingencies @ 15%)	21,200
29	PREAUTHORIZATION STUDIES	12,000
30	ENGINEERING & DESIGN	8,000
31	SUPERVISION & ADMINISTRATION	15,000
	TOTAL COST (CORPS OF ENGINEERS FUNDS)	$196,000
	TOTAL NON-FEDERAL COSTS	
	Public Landing & Berth (Self-liquidating)	15,000
	Spoil Area Dike (Self-liquidating)	5,000
	SUMMARY OF ESTIMATED COSTS	
	Federal Cost	
	Corps of Engineers	$196,000
	Coast Guard	1,000
	Total	$197,000
	Required Non-Federal Costs	20,000
	TOTAL FEDERAL AND REQUIRED NON-FEDERAL COSTS	$217,000

ESTIMATE OF BENEFITS

57. Benefits as a result of the proposed anchorage improvements are expected to accrue to the existing and prospective fishing fleets. Benefits expected to accrue to recreational interests are considered to be negligible, since the current recreational fleet consists of only five craft drawing one to two feet of water and it is anticipated that only one or two boats will be added to this fleet in the event of improvement. Transient recreational craft are few. It is estimated that present and future fishing interests would be benefited in the amount of $34,700.

58. The present lobster fleet that lands its catch in Bass Harbor consists of 69 boats. Fifty-four moor in the harbor and 15 in nearby coves. The average lobster boat requires an average of 1.5 feet of tide to reach the unloading berths without delay. Because the tide is less than 1.5 feet for 3.1 hours of the tide cycle, the average delay is estimated at 0.4 hour per trip. Although the proposed improvements of the harbor would eliminate the tidal delays, Fish and Wildlife Service has reported that no increase in the lobster catch per boat would result and that fishermen would continue to average 100 pounds of lobster per day. However, it is expected that the proposed southwest six-acre, six-foot anchorage basin would reduce the tidal delays along that shore front area, which would shorten the working day (currently about 10 hours) and reduce operating costs for that number of the lobster fleet using the west wharves. Assuming one-half of the 69 lobster boats use the west wharves, or 35, and an average operating cost per boat of $2.50/hour, the total savings in operating costs would be 35 boats at 0.4 hour at $2.50/hour for 160 trips per boat per year, or $5,600/year. However, since total elimination of the tidal delays experienced would be dependent upon a short connecting channel of commensurate depth from the six-foot anchorage to the wharves, as well as the proposed anchorage, only a part of these benefits are considered to be the direct result of the anchorage. Therefore, benefits are taken as approximately 35% of the total benefits, or 0.35 x $5,600 = $2,000.

59. It is anticipated that the 15 lobster boats currently mooring in the nearby exposed roadsteads of Duck Cove, Goose Cove, and Seal Cove, which have no facilities for marketing a catch and no gasoline or fishing supplies, would transfer to Bass Harbor in the event of improvement. In view of this anticipated transfer, it is recognized that the time required for returning to the home coves after unloading the catch at Bass Harbor, would be approximately halved as a result of automobile versus boat travel. However, it

is not felt that the estimated 20 minutes per day per boat saved would result in an increased lobster catch. The savings to the mechanical equipment would be minor. Although no monetary benefits are expected, benefits due to a reduced working day would be experienced by these lobstermen.

60. It is estimated that four lobster boats would be added to the existing fleet in the event of improvement at Bass Harbor. This would result in an annual increase in annual dockside gross values of $24,000. Assuming the net value to be 40% of the gross value, an annual benefit equal to 0.40 x 24,000, or $9,600, would accrue to the general public from the increased lobster catch.

61. It is considered that the anchorage improvements would also provide for normal expansion of the lobster fleet during project life, as contemplated future increases in the real value of lobster make an offshore fishery more attractive. The U. S. Fish and Wildlife Service has estimated that catches from these offshore lobster resources could reach 120,000 pounds annually with a gross dockside value of $48,000. The net value would be 0.40 x $48,000, or $19,200. Assuming that these annual landings of 120,000 pounds would be attained over a normal growth period of the first 50 years of a 100-year project life, and assuming a 4% interest rate, annual benefits would be computed at 0.436 x $19,200, or $8,400.

62. In the spring of 1960, groundfish operations were initiated at the Higgins Fish Wharf, site of the former C. H. Rice Company. Currently the average annual landings of groundfish at Bass Harbor are 1,000,000 pounds. This groundfish is brought in by several draggers, both home based boats and boats from outlying islands. A tidal delay is encountered by these draggers under present conditions, but it is considered that elimination of the tidal delays by the proposed improvement would not result in an increased fish catch. Intangible benefits in the form of a reduced working day and minor savings in production costs would be accrued.

63. The proposed harbor improvements are expected to increase the local landings of groundfish by more than 1,000,000 pounds with a possibility of 2,000,000 pounds as a result of transfers and normal growth. Most of this anticipated increase would be due to the transfer of 8 transient draggers which currently unload their catches at harbors other than Bass Harbor for fear of becoming grounded out in the latter harbor, although the running time from the fishing grounds to these other harbors is much longer. It has been estimated that three hours per trip would be saved if these eight draggers could unload their

catches at Bass Harbor. As a result of this transfer, it is expected that an increase of 1,000,000 pounds will take place within a relatively short period of time after improvement and would result in almost immediate benefits. Based on an average catch per vessel per trip of 4,000 pounds and a dragger operating cost of about $8.00 per hour, the savings to be realized would be (1,000,000 lbs./yr. ÷ 4,000 lbs./trip) at $8.00/hr. x 3 hrs. = $6,000.

It has also been estimated that the groundfish industry at Bass Harbor will continue to increase gradually over the first 50 years of the project life, at which time 1,000,000 pounds per year additional are anticipated. At $0.05 per pound, this represents a gross value of $50,000 and a net value of $20,000. Average annual benefits over this normal growth period would be 0.436 x $20,000, or $8,700.

64. Local interests have claimed that boats are frequently damaged during severe storms, particularly from the southwest. Combinations of wind and tide often bring the closely moored craft together with resulting damage to topside and transoms. There are no records of damage or loss to boats and boat gear upon which a definite monetary estimate could be made. However, since available information indicates that loss due to storm damage because of overcrowded conditions is experienced, it is felt that provision of adequate anchorage area to allow proper spacing of the boats would reduce damages and facilitate easier and quicker moorings.

The following table summarizes the above estimated benefits:

Source of Benefit	Amount
Lobster vessels presently unloading at west side of inner harbor - (35):	
Reduced operating costs by reduction of tidal delay	$ 2,000
Four new lobster vessels:	
Increased lobster catch	9,600
Eight additional lobster vessels (normal growth - 50 yrs.):	
Increased lobster catch	8,400

Source of Benefit (cont)	Amount
Eight transferred draggers - groundfish:	
Reduced operating costs through closer market	$ 6,000
Eight additional draggers - (normal growth - 50 yrs.):	
Increased fish catch	8,700
TOTAL BENEFITS	$34,700

APPORTIONMENT OF COSTS AMONG INTERESTS

65. The total first cost of construction is estimated to be $197,000, of which $196,000 is apportioned to the Corps of Engineers (includes $12,000 for preauthorization studies) and $1,000 is apportioned to the United States Coast Guard for navigation aids. The total additional annual maintenance is expected to be $5,300. The Corps of Engineers is apportioned $5,200 of this amount while the Coast Guard's share would be about $100.

ESTIMATE OF ANNUAL CHARGES

66. The annual charges for the improvement have been computed on the basis of a 100-year project life with a Federal interest rate of 2.625 percent. Maintenance costs are based on experience with a typical mud, sand and gravel harbor and have been included entirely as a Federal annual charge. Federal annual charges are computed as follows:

Federal	
Corps of Engineers	
Interest & Amortization ($196,000 x 0.02838)	$ 5,600
Maintenance	5,200
U. S. Coast Guard - Aids to Navigation	
Interest & Amortization ($1,000)	100
Maintenance	100
Total Federal Annual Charges	$11,000
Non-Federal	-0-
Total Annual Charges	$11,000

COMPARISON OF BENEFITS AND COSTS

67. A comparison of the estimated benefits evaluated at $34,700 and the annual carrying charges of $11,000 results in a benefit-cost ratio of 3.2 to 1.

PROPOSED LOCAL COOPERATION

68. The benefits to be derived from improvement of Bass Harbor are general in character. In view of this fact, it is considered that no local cash contribution toward the first cost of construction of the project should be required. However, since Federal expenditure toward a small navigation project under Section 107 is limited to $200,000, it is considered that local interests be required to make a cash contribution for all costs in excess of this Federal limit to insure that expenditure of Federal funds will result in a complete and fully effective project. Other requirements of local cooperation would be to provide, without cost to the United States, all necessary lands, easements, and rights-of-way, including suitably diked spoil disposal areas, needed for the construction and maintenance of the project; hold and save the United States free from damages that may result from construction and maintenance of the project; provide and maintain, without cost to the United States, an adequate public landing, with commensurate berth depth, adjacent

to the upper anchorage, open to all on equal terms; and regulate the use, growth and free development of the harbor facilities with the understanding that said facilities will be open to all on equal terms. Local interests have provided reasonable assurances that the requirements of local cooperation will be met.

COORDINATION WITH OTHER AGENCIES

69. All Federal, State and local agencies having an interest in the improvement of navigation conditions at Bass Harbor were notified of the public hearing held in Tremont Town Hall, Bernard, Maine, on 29 August 1956. All interested agencies have been consulted throughout the study concerning the effects of the proposed improvement on their activities. Comments made by the U. S. Fish and Wildlife Service are contained in Appendix A of this report.

SCHEDULE FOR DESIGN AND CONSTRUCTION

70. It is estimated that preparation of contract plans and specifications for the project will require four months. The estimated cost is $8,000.

71. Construction of the project can be accomplished under a single contract to be completed in a three-month period. Expenditures are as follows:

a. Allocated to Date

Survey Report	$ 11,000
Detailed Project Report	1,000
	$ 12,000

b. Required to Complete

Plans and Specifications	$ 8,000
Construction, Engineering during Construction, Supervision and Administration	$176,000
Total	$196,000

OPERATION AND MAINTENANCE

72. Maintenance of the project will be the responsibility of the United States. It is estimated that periodic dredging will be required about every 10 years. The annual cost for maintenance dredging is estimated at $5,200.

CONCLUSION

73. The needs of commercial navigation at Bass Harbor would be satisfied by provision of an anchorage basin of 24 acres, 6 and 10 feet deep in the harbor, as shown on the map accompanying this report. The resulting benefits to the commercial fleets, present and prospective, are sufficient to warrant Federal improvement. Local interests have indicated that the plan of improvement meets their needs and that the requirements of local cooperation will be met. All agencies known to be interested have been consulted and have expressed no objection to the improvement.

RECOMMENDATION

74. The Division Engineer recommends Federal improvement of Bass Harbor, Maine be authorized by the Chief of Engineers under provisions of Section 107 of the River and Harbor Act of 1960, to provide for a total anchorage area of 24 acres, 6 and 10 feet deep consisting of (a) 6 acres 6 feet deep on the southwest side of the inner harbor adjacent to the waterfront area; (b) 8 acres 10 feet deep adjacent to and east of the above 6-foot anchorage; and (c) 10 acres 6 feet deep at the head of the inner harbor. The total project cost is estimated at $197,000, including $12,000 for preauthorization studies and $1,000 for aids to navigation. Annual maintenance costs are estimated at $5,300. In view of the general nature of the benefits, the project cost would be borne by the Federal Government. The recommendation is made subject to the condition that local interests:

a. Assume full responsibility for all project costs in excess of the $200,000 Corps of Engineers cost limitation under Section 107 of the 1960 River and Harbor Act, if found necessary to provide a complete project.

b. Provide, without cost to the United States, all necessary lands, easements, and rights-of-way, including suitably diked spoil disposal areas needed for the construction and maintenance of the project.

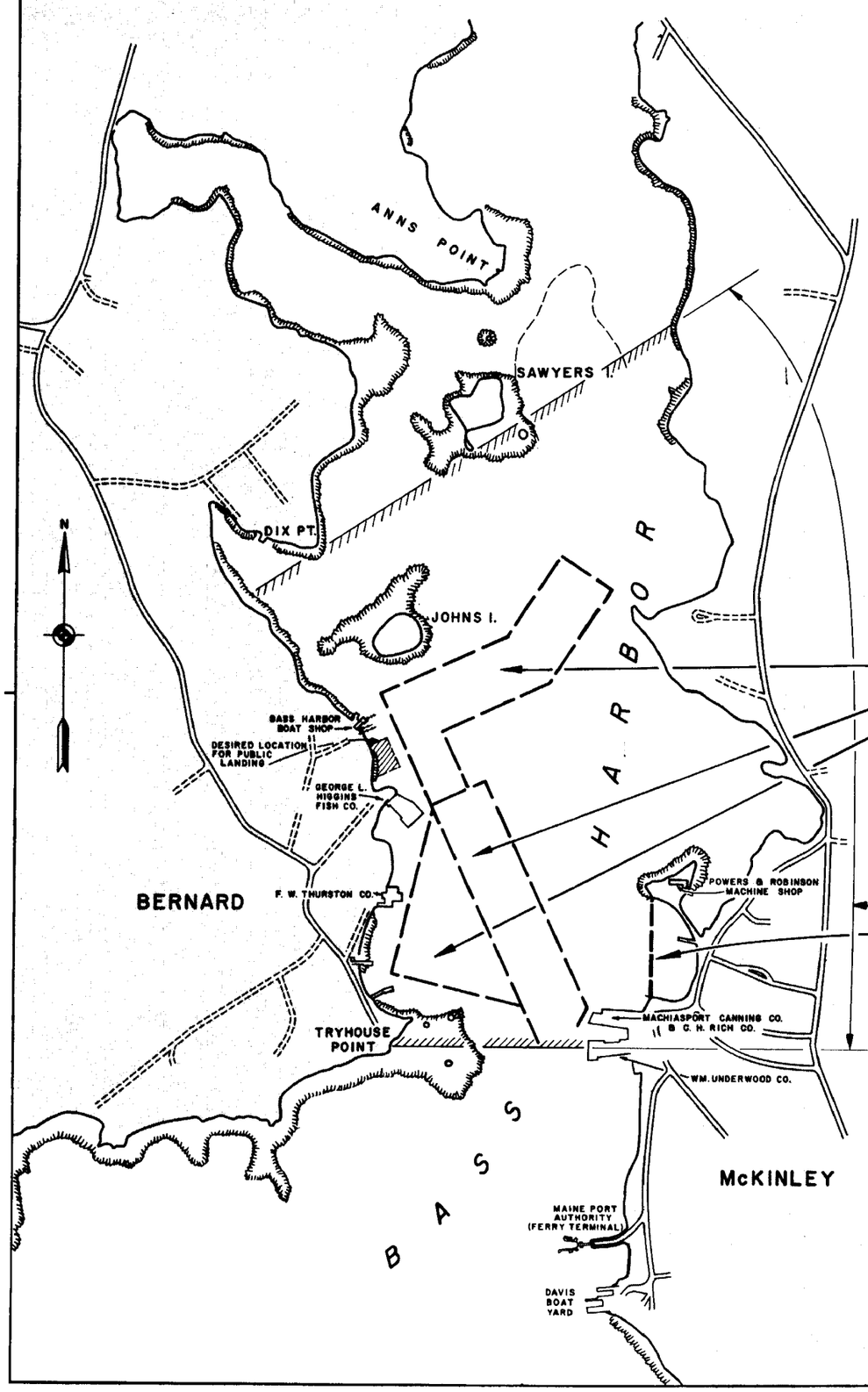
c. Hold and save the United States free from damages that may result from construction and maintenance of the project.

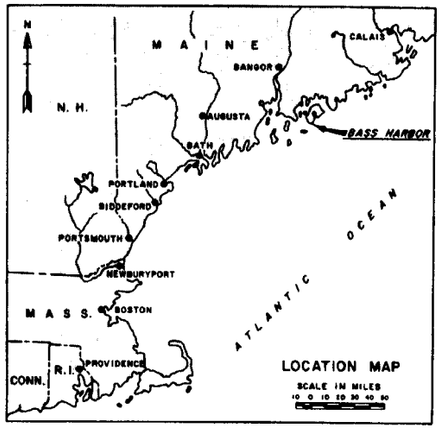
d. Provide and maintain, without cost to the United States, an adequate public landing adjacent to the upper anchorage, open to all on equal terms, and having a berthing depth commensurate with the adjacent 6-foot anchorage.

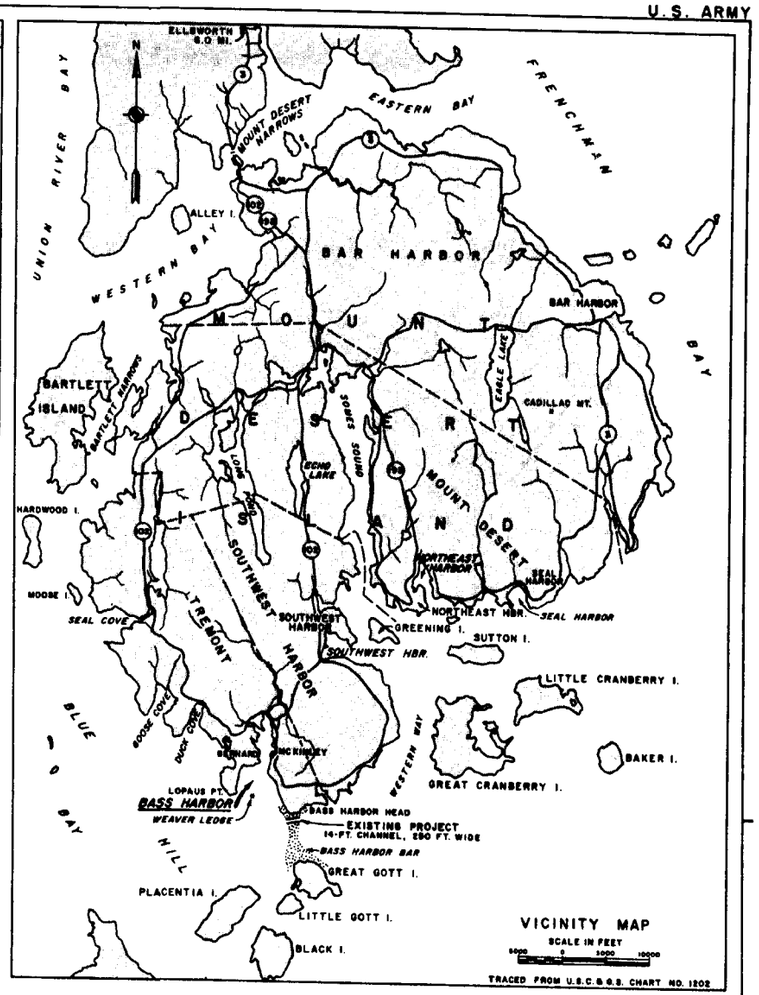
e. Regulate the use, growth and free development of the harbor facilities with the understanding that said facilities will be open to all on equal terms.

CORPS OF ENGINEERS

U.S. ARMY







CONSIDERED IMPROVEMENT

RECOMMENDED

10-ACRE ANCHORAGE-6 FEET DEEP
8-ACRE ANCHORAGE-10 FEET DEEP
6-ACRE ANCHORAGE-6 FEET DEEP

DESIRED IMPROVEMENT

NOT RECOMMENDED

DREDGE TO DEPTHS OF 6 & 10 FEET
BULKHEAD

U.S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS, WALTHAM, MASS.

BASS HARBOR, MAINE

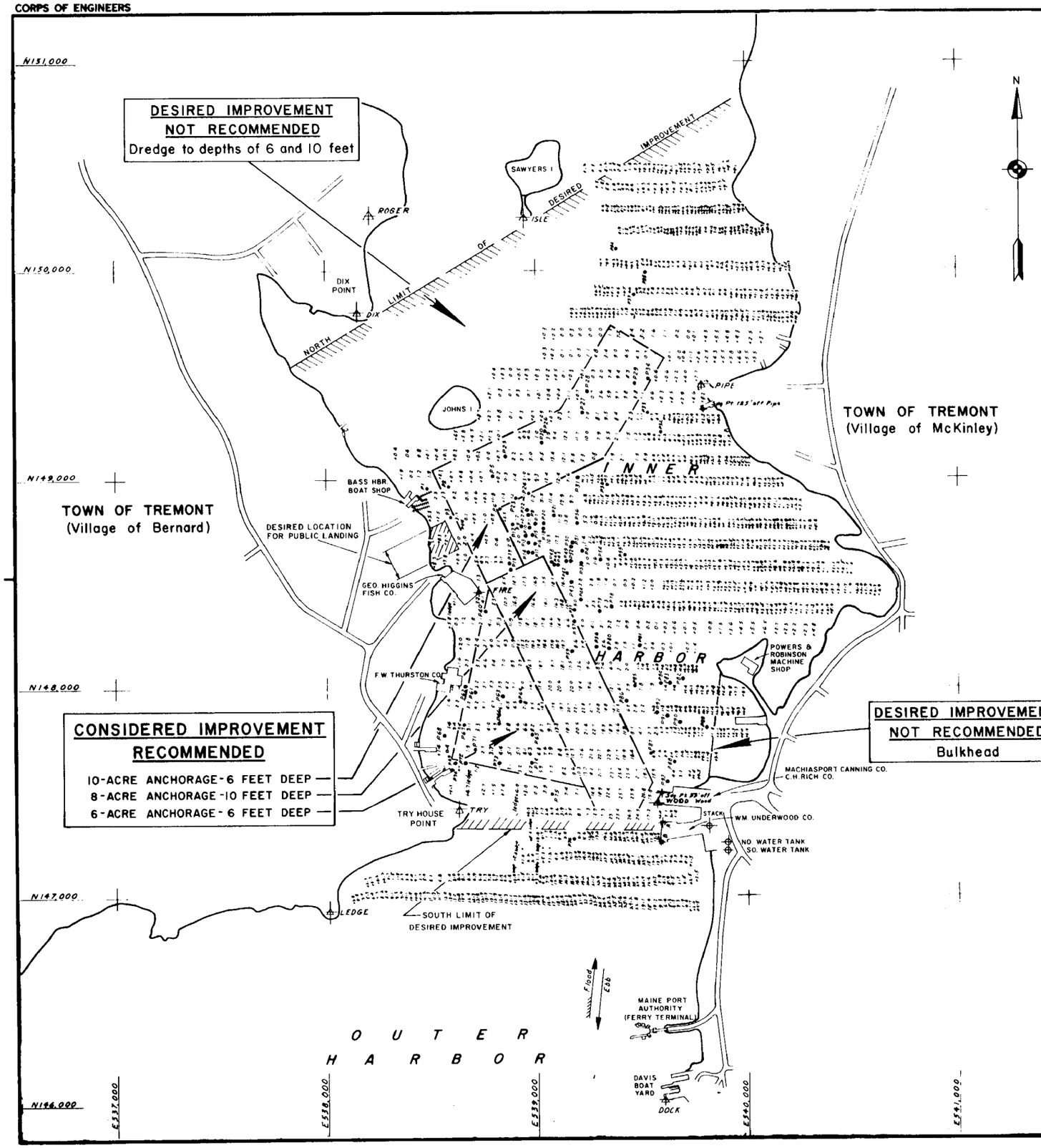
SHEET 1 OF 2 — SCALE IN FEET 500 0 500 — MARCH 1962

APPROVED: CHIEF, ENGINEERING DIVISION	TO ACCOMPANY DETAILED PROJECT REPORT DATED: MARCH 28, 1962
SUBMITTED: CHIEF, PLANNING AND REPORTS BRANCH	
DR BY: A.D.C.	
CHIEF, RIVER AND HARBOR SECT.	TR BY: A.D.C.
PROJECT ENGINEER	CH BY: D.E.A.
	FILE NO. 1517 D-3-4

PLATE NO. 1

CORPS OF ENGINEERS

U. S. ARMY



LIST OF PROBINGS

NUMBER	DEPTH OF WATER	ELEVATION BELOW M.L.W. TOTAL DEPTH	PENETRATION	MATERIAL
P1	1.6	10.2	8.6	Mud & Sand
P2	+0.8	10.1	10.9	" "
P3	2.6	10.1	7.5	" "
P4	0.5	10.4	9.9	" "
P5	+0.3	10.8	11.1	" "
P6	+0.8	6.8	7.6	Mud & Sand To Refusal
P7	+1.9	+1.9	0.0	Ledge
P8	+1.9	+1.9	0.0	"
P9	+1.3	+0.3	1.0	Sand To Rock
P10	+1.3	+1.3	0.0	Ledge
P11	+1.2	+1.2	0.0	"
P12	1.4	4.9	3.5	Mud & Sand to Refusal
P13	5.1	5.3	2.2	Sand to Rock
P14	7.1	10.6	3.5	Mud & Sand to Hard
P15	1.6	2.7	1.1	Sand & Gravel to Refusal
P16	5.3	7.1	1.8	" "
P17	8.8	10.4	1.6	Cobbles to Hard
P18	5.1	6.2	1.1	Small Boulders & Cobbles - Refusal
P19	8.0	10.0	2.0	Cobbles to Hard
P20	3.8	4.9	1.1	Small Boulders to Refusal
P21	9.1	11.0	1.9	Cobbles to Hard
P22	2.0	3.8	1.8	Gravel to Rock
P23	0.2	8.4	8.2	Mud & Sand To Refusal
P24	6.9	10.1	3.2	Mud & Sand
P25	1.6	10.0	8.4	Mud & Sand to Hard
P26	2.3	11.1	8.8	Mud & Sand
P27	6.2	11.2	5.0	" "
P28	+0.3	10.4	10.7	" "
P29	2.5	11.0	8.5	" "
P30	5.7	11.3	5.6	" "
P31	+0.6	10.8	11.4	Cobbles to Mud & Sand
P32	0.0	8.2	8.2	Mud & Sand to Refusal
P33	1.2	10.0	8.8	Mud & Sand
P34	+0.1	10.0	10.1	" "
P35	5.8	12.1	6.3	" "
P36	+0.7	10.1	10.8	" "
P37	4.9	10.2	5.3	" "
P38	+3.3	10.2	13.3	" "
P39	4.1	10.1	6.0	" "
P40	3.4	11.1	7.7	" "
P41	2.4	6.3	3.9	Mud & Sand to Refusal
P42	5.2	5.2	0.0	Rock
P43	5.1	7.5	2.4	Sand to Rock
P44	4.0	10.5	6.5	Mud & Sand
P45	8.2	8.2	0.0	Rock
P46	7.2	7.2	0.0	"
P47				Void

NOTE:
Probings taken with a 3/4 inch iron pipe forced down by hand by 2 men.

LIST OF PROBINGS

NUMBER	DEPTH OF WATER	ELEVATION BELOW M.L.W. TOTAL DEPTH	PENETRATION	MATERIAL
P48	10.2	10.2	0.0	Rock
P49	5.3	5.3	0.0	"
P50	7.4	8.2	0.8	Cobbles & Small Boulders
P51	10.3	11.8	1.5	" "
P52	5.8	5.8	0.0	Rock
P53	2.8	6.8	4.0	Mud & Sand To Refusal
P54	+0.3	0.2	0.5	Mud To Rock
P55	+2.3	+0.8	1.5	Mud & Sand To Rock
P56	5.2	10.8	5.6	Mud & Sand
P57	5.5	10.3	4.8	" "
P58	5.8	10.9	5.1	" "
P59	8.7	11.9	3.2	" "
P60	9.6	10.2	3.4	" "
P61	4.6	10.9	6.3	" "
P62	3.0	11.0	8.0	" "
P63	7.2	11.2	4.0	" "
P64	8.2	11.5	3.3	" "
P65	8.0	11.0	3.0	" "
P66	3.7	10.7	7.0	" "
P67	2.9	11.1	8.2	" "
P68	1.0	8.3	7.3	" "
P69	0.6	6.1	5.5	Mud & Sand to Rock
P70	+0.7	+0.7	0.0	Rock
P71	3.1	10.1	7.0	Mud & Sand
P72	1.4	8.4	7.0	Mud & Sand To Refusal
P73	3.7	10.2	6.5	Mud & Sand
P74	5.6	10.6	5.0	" "
P75	5.6	10.1	4.5	Mud & Sand to Hard
P76	8.4	10.1	1.7	Cobbles to Rock
P77	5.5	10.3	4.8	Mud & Sand
P78	1.4	5.3	3.9	Mud & Sand to Refusal
P79	2.4	10.5	8.1	Mud & Sand
P80	4.7	10.5	5.8	" "
P81	0.7	10.0	9.3	" "
P82	+0.4	+0.1	0.3	Sand to Rock
P83	0.7	9.0	8.3	Sand & Cobbles To Refusal
P84	1.2	10.2	9.0	Mud & Sand
P85	2.2	10.1	7.9	Mud To Hard Sand to Mud & Sand
P86	6.6	11.4	4.8	" " " "
P87	6.3	10.9	4.6	Hard Sand To Mud to Cobbles
P88	2.0	11.0	9.0	Mud To Hard Sand to Hard
P89	+0.1	4.0	4.1	Gravel & Cobbles To Refusal
P90	1.3	8.0	6.7	Mud Sand - Hard to Refusal
P91	2.1	7.9	5.8	Sand to Hard Sand to Refusal
P92	2.2	10.7	8.5	Sand to Hard to Mud & Sand
P93	3.6	10.1	6.5	Sand To Hard

* One cut-in angle missed, location not plotted.

NOTES:

Soundings and probings are in feet and tenths and are referred to the plane of Mean Low Water.

Hydrography from surveys of May 16 to May 18, 1957 and June 6 to June 13, 1957 by E.J. Colvin.

Topography from above surveys.

B.M. 6 (1946) is a standard disk, stamped "No. 6 1946," set in highest point of large gray rock outcrop at Bernard, west of C.H. Rice Co. Wharf, 63 feet southwest of W.A. Andersons house, and 113 feet west of northeast-soutwest road in front of W.A. Andersons house. Elev. is 25.99 feet above M.L.W.

Coordinates are on the Mercator Grid System (East Zone) for the State of Maine.

Field books R & H. 1408-1409 and 1410.

Probings shown thus •P4

U.S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS, WALTHAM, MASS.

BASS HARBOR, MAINE

SURVEY MAP

SHEET 2 OF 2 — SCALE IN FEET 200 0 200 400 600 — MARCH 1962

APPROVED:
CHIEF, ENGINEERING DIVISION
SUBMITTED:
CHIEF, PLANNING AND REPORTS BRANCH
CHIEF, RIVER AND HARBOR SECT.
PROJECT ENGINEER

OR BY A.D.C.
TH BY A.D.C.
CH BY OE A

TO ACCOMPANY DETAILED PROJECT REPORT
DATED: MARCH 28, 1962

FILE NO. 1517 D-3-4

PLATE NO. 2

APPENDIX A

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

February 10, 1961

Division Engineer
New England Division
U. S. Army Corps of Engineers
424 Trapelo Road
Waltham 54, Massachusetts

Dear Sir:

With reference to your navigation study of Bass Harbor, Tremont, Maine as described in your letter of October 3, 1960, we have conducted a re-evaluation of the commercial fishery benefits. This letter constitutes our conservation and development report and has the concurrence of the Maine Department of Sea and Shore Fisheries and the Maine Department of Inland Fisheries and Game.

The plan of improvement as we presently understand it consists of an anchorage basin with a total area of 24 acres, consisting of a 6-foot basin of approximately 5.5 acres on the southwest side of the inner harbor adjacent to the developed waterfront area between Try House Point and the former C. H. Rice Company Wharf, a 10-foot basin of approximately 8.5 acres adjacent and to the east of this 6-foot waterfront anchorage, and a 6-foot basin of 10 acres with connecting channel north of the 10-foot anchorage and east of Johns Island, and a channel 6 feet deep 60 feet wide leading from the northwest corner of the proposed 10-foot anchorage to the vicinity of Bass Harbor Boat Shop. It is estimated that approximately 100,000 cubic yards of material would be dredged. Although no specific land areas were selected for this spoil disposal, it was considered probable that the disposal sites would be marsh areas in the vicinity. You concluded that since there was so much unused land now in the area, it was not considered that any major benefit would accrue from this land filling.

The present lobster fleet that lands its catch in Bass Harbor consists of 69 boats. Fifty-four moor in the harbor and 15 in the nearby coves. The proposed improvements of the harbor would decrease the tidal delays but would not increase the catch of lobsters per boat. It is expected that the fishermen will continue to average 100 pounds of lobsters per day of fishing effort. The decrease in tidal delay would shorten their working day which is presently estimated at 10 hours and reduce their other production costs.

The proposed improvements will allow for an expansion of the lobster fleet on local inshore areas, of about 4 boats with annual landings of 60,000 pounds. At 40¢ per pound this would bring an increase in annual dockside values of $24,000. These improvements will also provide for expansion of the lobster fleet when contemplated future increases in the real value of lobster will make an offshore fishery more attractive. While the extent of these offshore lobster resources has not yet been fully determined, it is estimated that landings may reach 120,000 pounds annually with a dockside value of $48,000.

Your letter of October 3 did not include an analysis of benefits associated with groundfish landings. Higgins Fish Wharf, located at the site of the former C. H. Rice Company, initiated groundfish operations in the Spring of 1960. This is the only dealer in groundfish located at Bass Harbor. From May through September 1960, 750,000 pounds of groundfish were landed. The anticipated 1960 landings and future annual landings, without harbor improvements, are expected to be 1,000,000 pounds of groundfish.

The proposed harbor improvements are expected to increase the local landings of groundfish by more than 1,000,000 pounds with a possibility of an increase in landings of 2,000,000 pounds. The current average price paid to these fishermen at landing is $.05 per pound. While these increases in local landings would be mainly due to transfers from other harbors, there would be a considerable savings in production costs due to shorter running time from fishing grounds to port.

Most of this anticipated increase in local landings would be due to 8 transient vessels which, at present, do not unload their catch at Bass Harbor. Most dragger vessels presently refuse to enter the harbor for fear of becoming grounded.

Your estimate of savings due to reduced vessel damage with the provision of a harbor of refuge appears reasonable.

Use of the marshes in the vicinity of the proposed improvements as spoil areas would be detrimental to the fish and wildlife resources of the area.

With the exception of the possible use of marshes as disposal sites we can foresee no significant adverse effects of the proposed project on the fish and wildlife resources. Therefore, we recommend that the Fish and Wildlife Service, the Maine Department of Inland Fisheries and Game, and the Maine Department of Sea and Shore Fisheries be consulted in the final selection of spoil disposal areas related to the proposed project.

The opportunity to review your report on Bass Harbor is appreciated.

Sincerely yours,

John S. Gottschalk
Regional Director
Bureau of Sport Fisheries & Wildlife

John T. Gharrett
Regional Director
Bureau of Commercial Fisheries

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
59 Temple Place
Boston 11, Massachusetts

January 11, 1962

Division Engineer
New England Division
U. S. Army Corps of Engineers
424 Trapelo Road
Waltham 54, Massachusetts

Dear Sir:

Reference is made to your letter of November 3, 1961 requesting our comments on spoil disposal sites for the Bass Harbor, Maine, navigation improvements. This letter, prepared under authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), supplements our conservation and development report of February 10, 1961 for this project. It was prepared with the cooperation of the Maine Department of Inland Fisheries and Game and the Maine Department of Sea and Shore Fisheries, and has the concurrence of these agencies.

We have no objection to spoil disposal use of Spoil Area No. 3 as outlined on Plate I. This area is the same as outlined on the map which was attached to your letter of November 3.

You suggested that we give consideration to the possible selection of alternate spoil disposal areas that would not affect fish and wildlife resources. Plate I outlines the area considered in our studies which we have designated as the periphery of Bass Harbor. We would object to spoil disposal on Area No. 1, Bass Harbor Marsh; and Area No. 2 as shown on Plate I. Area No. 2 is a clam flat and provides part-time employment for some of the local people. We conclude that the dredging operator should avoid Area No. 2 during project construction. If the operator finds it necessary to move his equipment across this area, then he should be cautioned not to disturb the bottom. Disturbance of the bottom would destroy existing clam resources. The selection and use of other alternate spoil disposal sites within the periphery of Bass Harbor would not significantly affect fish and wildlife resources.

Therefore, we recommend--

1. That no spoil material be placed on Areas 1 and 2 as outlined on Plate I.

2. That the contract stipulate that the dredging operator avoid Area 2 during project construction.

No further studies by this Service will be required unless alternate spoil disposal sites outside the periphery of Bass Harbor are selected. Should such alternate sites be selected, we would like to have notification sufficiently in advance of construction to prepare a new report.

We appreciate the opportunity to comment on the selection of these spoil disposal sites.

Sincerely yours,

E. W. Bailey
Acting Regional Director
Bureau of Sport Fisheries & Wildlife

Donald Y. Aska
Acting Regional Director
Bureau of Commercial Fisheries

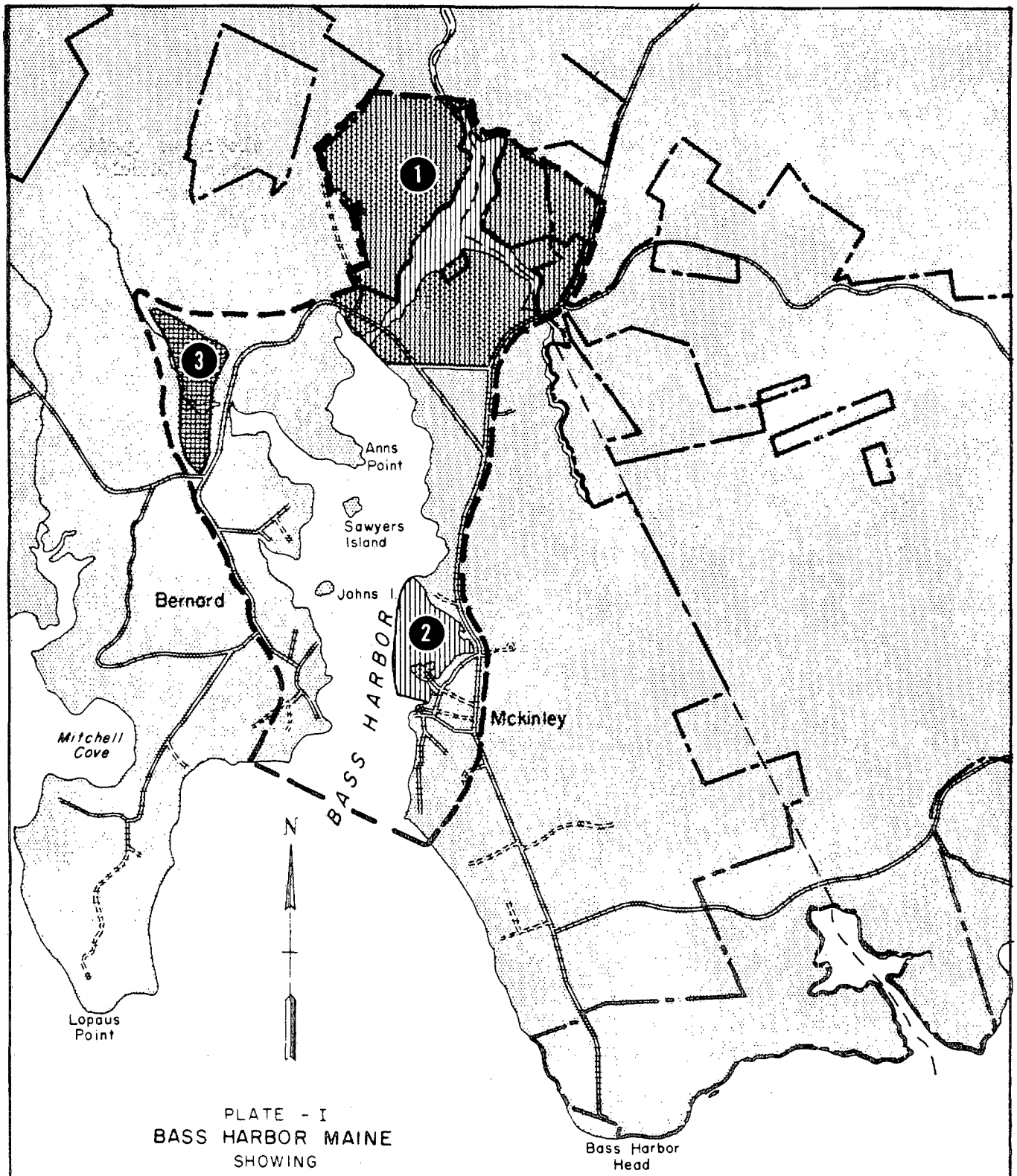


PLATE - I

BASS HARBOR MAINE

SHOWING

IMPORTANT FISH AND WILDLIFE FEATURES

DECEMBER 1961

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
BRANCH OF RIVER BASIN STUDIES
BOSTON, MASS.

LEGEND

PERIPHERY OF STUDIED AREA

SPOIL AREA

AREAS NOT TO BE USED FOR SPOIL DISPOSAL

2000 0 2000 4000

SCALE IN FEET

APPENDIX B

TOWN OF TREMONT

BERNARD, MAINE

February 5, 1962

Seymour A. Potter, Jr.
Brigadier General, USA
U.S.Army Engineer Division, New England
Corps of Engineers
424 Trapelo Road
Waltham 54, Mass.

Reference: NEDGW

Dear Sir:

On January 29 the Selectmen of the Town of Tremont called a public meeting for the purpose of ascertaining as well as possible at this time the general attitude of the Town toward the proposed revision of the dredging plan for Bass Harbor. The new revisions on the plan presented at an earlier meeting in October were very ably presented to the meeting by Mr. Frank Fogarty of your office. The meeting was also attended by Mr. Edward Langlois of the Maine Port Authority.

We had an excellent turn-out of approximately seventy-five people and to the best of our knowledge, every facet of the revised plan -- including the amount of necessary participation by the Town -- was discussed and explained.

The people attending the meeting were then asked to show their sentiments in regards to the revised plan and the vote of the meeting was unanimously in favor.

I can only add that, while this informal vote could not be binding on the Town, as you are aware, I do feel that it shows quite clearly that the Town is in favor of the dredging project. It is also aware that its financial participation is necessary and has already shown this awareness in a material way by actual appropriations of money made in the past and to be made again this year, these moneys having been used to create a permanent fund, invested until it becomes necessary to call upon it for purposes in connection with the dredging.

Yours very truly,

Eleanor R. Mayo

Eleanor R. Mayo, Ch.

ccs to: Edward Langlois
Clifford McIntire

STATE OF MAINE
OFFICE OF THE GOVERNOR
AUGUSTA

JOHN H. REED
GOVERNOR

June 1, 1962

Seymour A. Potter, Jr.
Brigadier General, USA
Division Engineer
U. S. Army Engineer Division, New England
Corps of Engineers
424 Trapelo Road
Waltham 54, Massachusetts

Dear General Potter:

Your letter of May 25 and the enclosed copy of the improvement plan for Bass Harbor, Tremont, Maine, has been received.

It is our understanding that the proposed dredging plan meets the needs and desires of the area concerned and that local interests are prepared to fulfill the requirements of local cooperation. It is understood that the cost limitation for the Corps of Engineers is $200,000 and that it would be the responsibility of local interests to pay additional costs, should the expense of the project exceed this amount. The other requirements of local cooperation are also understood.

The proposed navigation improvement should be of substantial benefit to the commercial fishing fleet in the Bass Harbor area, providing much-needed anchorages and sheltered mooring space. Such benefits will also accrue to the State as a whole and to the general public.

It will be appreciated if you will keep this office advised of any subsequent action taken by the Chief of Engineers on this project.

Sincerely yours,

John H. Reed

John H. Reed
Governor

JHR:iv